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### From Left Arm Numbness to Incidental Pituitary Macroadenoma

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# From left arm numbness to Incidental Pituitary Macroadenoma

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## Introduction:

Pituitary adenomas are the most common tumors in the sella turcica. The symptoms of vision loss or change is due to the anatomical location of the pituitary tumor beneath the optic nerve. (2) As the tumor grows in size it can compress the optic nerve and vision changes will occur. Our case demonstrates a 40 year old male who had one brief 1 time episode of blurry vision and dull intermittent headaches that was not debilitating in nature. A discovery of pituitary adenoma prior to onset of symptoms of constant vision changes or elevated hormones are crucial to a more favorable prognosis. (1)

## Case Presentation:

Pt is a 40-year-old male who presented to the ED for evaluation of left arm numbness and tingling for the past one week. The patient reported that one week ago he felt that his left arm was suddenly heavier than his right arm. The patient denied having that specific type of feeling before and did not report of any trauma to his arm. A month ago, patient started working out and lost about 61lbs. He reports that his work outs only consisted of Cardio and running on the treadmill and denies lifting any weights. Over this past week pt reported of a new symptom, tingling sensation throughout his left arm and left sided chest pain. Pt reports that the pain feels like electrical sensation starting midclavicular to right below his left nipple. He stated over the past few days, the numbness and tingling has been progressively getting worse which sought him to seek care in the ED. Pt also reported of one time brief episode of blurry vision that lasted seconds in the beginning of the week and previously had intermittent headaches which is unusual for him to have. He denies any fevers, chills, nausea/vomiting.

PMH consist of degenerative changes in lumbar spine, HTN and HLD. Pt reports of getting a lumbar disc surgery in 2013. He denies using any illicit drugs and previously smoked marijuana.

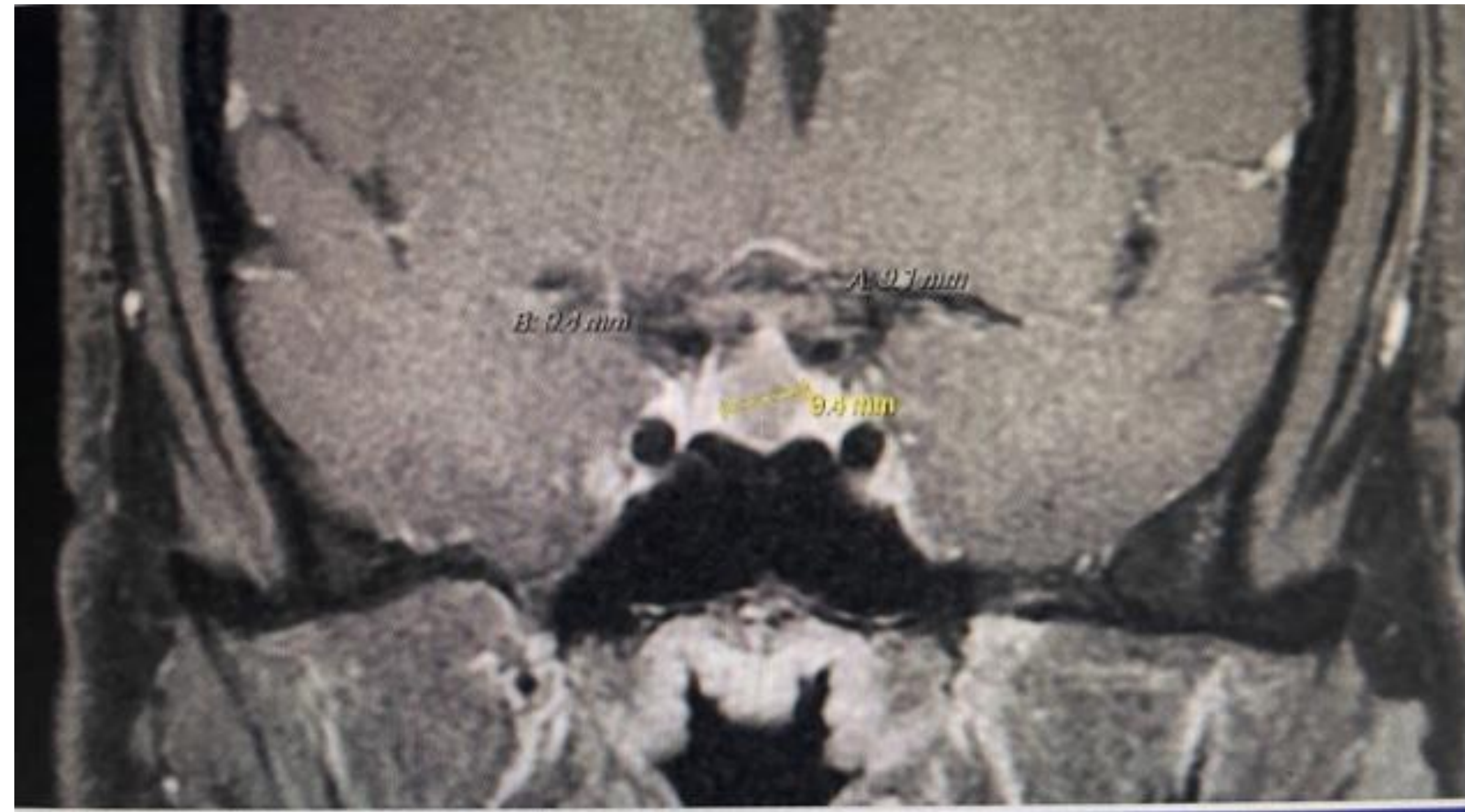
Physical Exam showed a well appearing male in no acute distress. Neuro exam reveal Cranial Nerves intact, equal +5 strength in upper and lower extremities. Negative for decrease sensation in upper and lower extremities, spurling test, abnormal gait, abnormal coordination, loss of peripheral visual fields and AAOx3. MSK exam was negative for any swelling or edema in upper and lower extremities and chest wall was non-tender. No gynecomastia present or nipple discharge.

Labs gathered on pt showed a Hgb of 16.6, Troponin 3, CK 196, WBC 6.3, K 4.1, Creatinine 1.12, Calcium 9.6 and pt was Covid neg. EKG revealed HR 62, QTC 410, normal axis, sinus rhythm and and acute ischemic changes. Xray did not show any abnormalities.

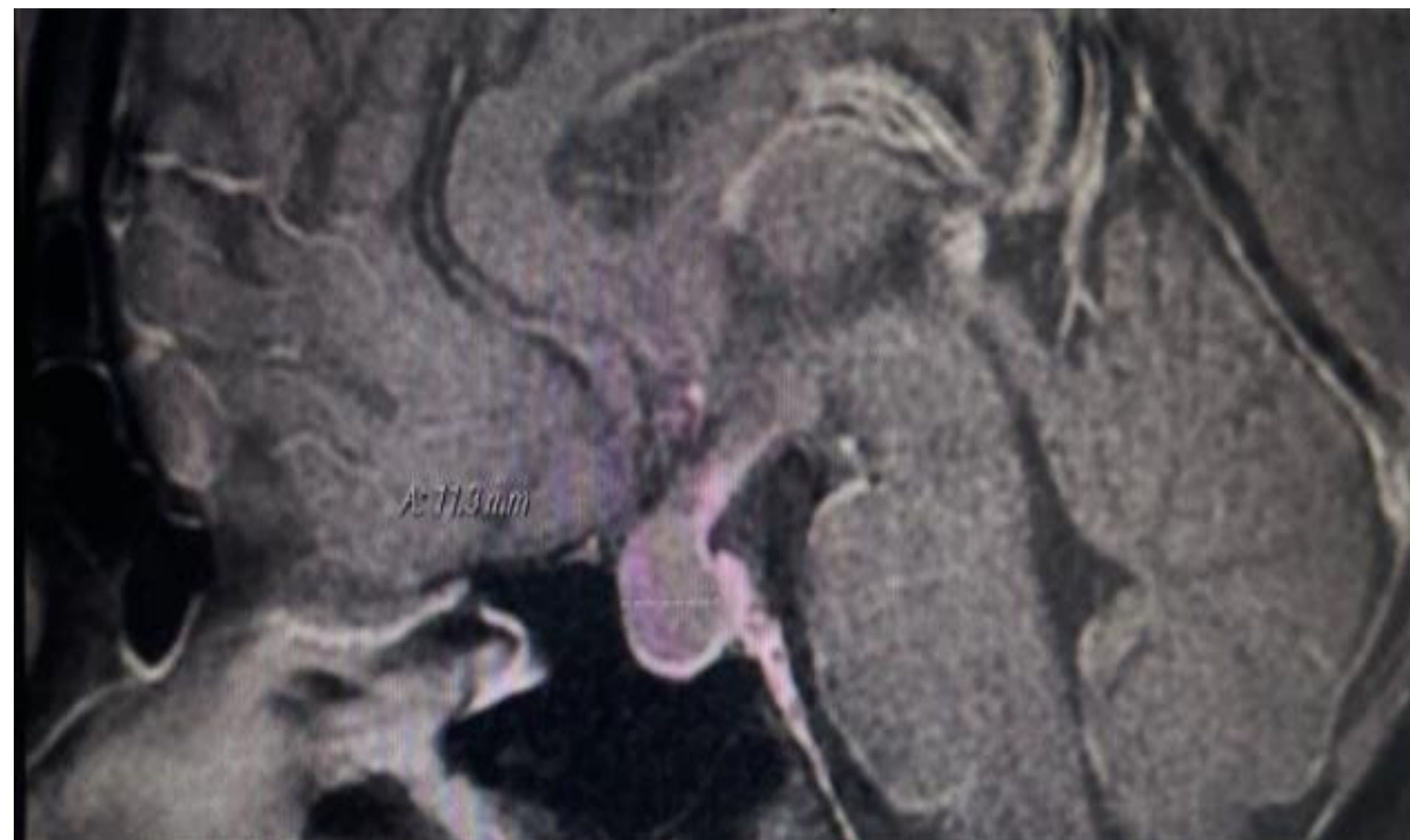
CT of head revealed a Hyperdense mass or less like apoplexy in the area of the sella turcica. within pts CT cervical spine revealed no fracture or listhesis but disc spaces showed an endplate spurring and loss of disc height most pronounced at C4-c5, c5-c6, and c6-c7. A high grade foramina narrowing particularly on the left at c6c7 was also noted.

MRI with and without contrast of the brain for follow up imaging. MRI showed a 9x9x11mm pituitary mass, likely a macroadenoma with no hemorrhage or infarction.

Neurosurgery was consulted and requested pt to be transferred to Washington township hospital for further work up and an Endocrine lab panel was ordered. Pts TSH, LH, Prolactin, am Cortisol was all within normal range. Pt was seen and evaluated by neurosurgery the day after and was discharged with follow up for repeat imaging in 6 months.



**Figure 1. MRI shows Pituitary adenoma measuring 9.4mm**



**Figure 2. Sagittal view of brain MRI shows measurement at 11.3mm, classifying adenoma as a Macroadenoma.**

## Discussion:

The pituitary gland is a small bean sized gland that sits below the hypothalamus that produces hormones that can regulate our metabolism, stress response, growth and sex organ function. (1) Pituitary adenomas account for 10-15 % of intracranial tumors. (3) There location close to vital structures allows for patients to commonly present with Visual changes and headaches. These changes are due to an expanding adenoma compressing the optic nerve and mass effect causing headaches (3). Most of the tumors are incidentalomas without true clinical significance. Due to the various hormones the pituitary gland produces, patients can also present with elevated hormonal levels that may or may not cause a physical change. CT and MRI are excellent imaging tools for the diagnosis of pituitary adenoma but MRI is far more superior in detecting hemorrhage within the adenoma. (4) Our patient had a brief episode of blurry vision that ceased on its on as well as having intermittent headaches. He reported to the ED mostly for evaluation of left arm numbness/tingling that was more related to a cervical radiculopathy that a pituitary adenoma. With the combination of new headaches and blurry vision a CT of the head was warranted based on the differential of pituitary adenoma.

## Conclusions:

The diagnosis of pituitary adenoma commonly is followed by common symptoms such as headaches or visual changes. Our case report touch on a 40 y.o male pt who presented for left arm numbness/tingling but admitted to 1 brief episode of blurry vision and new intermittent headaches that was not present during this admission. Factoring the history and suspicious combination of new headaches and vision changes added pituitary adenoma to the differential. The use of CT is readily available in the ED and can be an asset to rule out multiple neurological differentials in a presenting pt. Our pt numbness and tingling in his left are was most likely due to a cervical radiculopathy due the moderate- severe narrowing of foramen in C6. However expanding our differential and getting images helped us identify a pituitary macroadenoma prior to severe symptom onset increasing the chance for a better prognosis.

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